



HELP

ASK OUR TECHNICAL EXPERTS

CONTACTS

PLEASE EMAIL THE RELEVANT DEPARTMENT

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for all PC problems

softwarehelp@computershopper.co.uk
for help with software applications

buyinghelp@computershopper.co.uk
for advice on PC purchases

businesshelp@computershopper.co.uk
for IT solutions to business goals

YOU CAN ALSO WRITE TO US AT:

Help
Computer Shopper
30 Cleveland Street
London
W1T 4JD

HELPPFILE

Access denied

Q I needed to make more room on my FAT32 C: partition. The D: partition on the same hard disk uses NTFS, so I thought I would move all the files to another drive, format the D: drive using FAT32 and increase the size of C: using the wonderful Paragon Hard Disk Manager. However, I'm left with two directories that I cannot delete, from Windows or DOS, via Run, cmd or using the tools available on the Paragon Rescue CD. I am having trouble with the latter as the commands don't match my handbook on Linux.

I created one directory, A_Temp, myself. I don't know how it became immutable; I certainly didn't make it so. The other is called System Volume Information. These are both system files, according to the attrib command, but I can't change anything about them using the attrib command. I can't delete them either and I get 'access denied' whatever I do.

Alan Malby, alan.malby@virgin.net

A Don't worry about these hard-to-delete files. You can delete or reformat a partition without deleting all its contents first. Use Windows XP's Drive Manager to remove the partition, leaving free space that the Paragon software can use to expand the C: drive.

If you are curious as to why this has happened, the NTFS stores security data for each file, including file ownership and access permissions. While most of us never use these, it is possible for these permissions to state that only the user account that created the file can change it. When running Windows XP Professional Edition, there is an option when you create new user accounts to keep that user's data private, making it impossible for other user accounts to read or delete it.

SIMPLE FILE SHARING

If you have ever re-installed Windows you'll experience problems because the new user accounts, even if they have exactly the same names as the old, are regarded

as different users and don't own the files created by the old user account. To solve this, you must first turn off simple file sharing. From any Explorer window choose Tools, Folder Options then, on the View tab, clear the last tickbox called Use Simple File Sharing.

Once this is turned off, right-clicking on a folder offers you a Sharing and Security option. Choose this, select the Security tab and click the Advanced button. Select the Owner tab and you can take ownership of a file or folder. Tick the 'Replace owner on sub-containers and objects' box, too. If you get a message denying you permission, move to the parent folder and try it from there. It is usually safest to set ownership to the Administrators group, which will allow any user account with administrative rights (on Windows XP, this means all except Limited users) to access the files. If you have set up any Limited user accounts, be careful. It is easy to lock these users out of access to their own files.

SYSTEM VOLUME INFORMATION

System Volume Information is a special case as it is created by Windows XP's System Restore. For some reason, this system folder is created on every drive, although it is rare for it to be used on any except the system drive. You cannot delete it unless you first disable System Restore.

We strongly advise you to back up all your partitions before using any partitioning program. Too often *Helpfile* is asked if it is possible to recover data lost during partition resizing. Unfortunately, it often isn't. Partition managers usually work fine, but when things go wrong they can leave a mess and it's easy to remove the wrong partition by accident.

Microsoft does not recommend you use FAT32 for partitions larger than 32GB. In fact, Windows XP refuses to create larger FAT32 partitions. Creating larger FAT32 partitions gives a file allocation table larger than many disk utilities were designed to handle, creating a risk of massive data corruption. You should never use FAT32 for partitions larger than 63GB.

Echoing notebook screens

Q I play bass in a function band. Our keyboard player is in the process of transferring the chord sequences for all the songs we perform into a Word document. He will then be able to scroll quickly through to a required song while still holding down a chord with his free hand. This is more difficult for me, as I need both hands to play. Can our notebooks be connected so my screen echoes what is on his, enabling him to select the next song for both of us?

Rob Rybak, info@ict-assist.co.uk

A A program called Remote Administrator does what you want. It allows you to see what is on the screen of a remote computer. Unlike Windows' own Remote Desktop application,

which blanks out the screen of the computer to which you connect, Remote Administrator shows the same display on both screens and allows both users to move the mouse and type on the keyboard. Provided you keep your hands off the keyboard and mouse, it's a great way for you to see exactly what's on his screen. See www.radmin.com for details.

Alternatively, you could attach an external LCD screen to the keyboardist's notebook. Most notebook computers have an option to display the same screen on both internal and external displays. Some automatically disable their own screen when you plug in an external display. The maximum length of a VGA cable varies from one computer to another, and depends on the sensitivity of the attached display, but you could probably get away with a 4m extension.



Botnets and zombies

Q I read with interest the 'Can Your Spam!' feature in *Shopper* December 2006 while travelling to my parents' house. On my arrival, I found my father puzzling over a number of emails that were being returned to him on a daily basis. I was also puzzled, but it soon dawned on me that my father's computer had been hijacked and is possibly being used as a spam zombie. His computer is using Windows XP Home Edition and has the Norton Internet Security package running, which is up to date.

The problem seems to manifest itself in Outlook when he sends and receives emails. He also gets many replies as 'message delivery failures' or 'host unreachable return to sender' messages. It appears the sender is an alias of his email address, but the username part is always different. He is receiving upwards of 10 of these a day.

Ian Outterson, ian_outterson@hotmail.com

A Spam senders are getting cleverer and using all sorts of tricks to get around spam-filtering software and services. Using large networks of computers that have been taken over by a virus is one such trick. Fortunately, your father's computer is not infected by a virus. Many of our readers have been puzzled by mail failure error messages related to mail they did not send. Those messages were sent by a spammer, but they did not come from your computer. If they had been sent from his computer, the spammers would have made sure your father did not get the telltale error messages.

You can see it was not sent from your computer by looking through the information in the error message. In most cases, this will include headers from the rejected message. What you are looking for is the IP address from which the original message originated. This will usually be the earliest received header, unless the spammer has added forged received lines to confuse you. In your example message above, it says:

Received: from ppp-124.121.39.178.revip2.asianet.co.th

It appears this message came from a dial-up user in Thailand rather than your dad.

Many spam messages get returned as undeliverable. Since the spammers don't want to be traced through an address for error messages, and particularly don't want the user of the computer they

```
From: Mail Delivery System [mailto:Mailer-Daemon@freenet.de]
Sent: 27 October 2006 07:05
To: iob@freeserve.co.uk
Subject: *** SPAM *** Mail delivery failed: returning message to sender
This message was created automatically by mail delivery software.
A message that you sent could not be delivered to one or more of its recipients. This
is a permanent error. The following address(es) failed:
save to inbox.spamverdacht
generated by brautsalon@goldmail.de
mailbox is full: retry timeout exceeded
----- This is a copy of the message, including all the headers. -----
Return-path: <lob@freeserve.co.uk>
Received: from [194.97.50.136]
(helo=mx3.freenet.de)
by mbox48.freenet.de with esmtpa (ID exim) (Exim 4.62 #12)
id 1GdKpu-00018b-OS
for brautsalon@goldmail.de; Fri, 27 Oct 2006 08:04:59 +0200
Received: from ppp-124.121.39.178.revip2.asianet.co.th ([124.121.39.178]:3866)
by mx3.freenet.de with smtp (port 25) (Exim 4.62 #12)
id 1GdKpk-00013u-Ar
for brautsalon@goldmail.de; Fri, 27 Oct 2006 08:04:58 +0200
Received: from 124.121.144.171 ([124.121.144.171])
by ppp-124.121.39.178.revip2.asianet.co.th (8.13.1/8.13.1) with SMTP id
k9R66nnH056837;
```

▲ Check the headers of an email to find out its genuine sender

have hijacked to see them, they love to send them elsewhere. The reason your father got the error message was that the sender email address was forged, in this case using a randomly generated username followed by his subdomain name. Many spam programs do this now. Others pick one address from the list of addresses the spam will be sent to and use that as the phoney sender address.

Such randomly generated usernames have become particularly common in the past few months. They mostly only affect users with their own domains, who have configured their mail-forwarding system to deliver all mail for unknown users in that domain to a single mailbox. We recommend that domain owners create rules to accept mail sent to common misspellings of valid addresses and reject all other mail for unknown users. The other people affected are customers of those ISPs that give each user their own subdomain and then deliver mail sent to any username at that subdomain. Fortunately, more and more mail handlers check for spam and undeliverable mail before they finish receiving an email. This enables them to refuse to accept delivery so the computer that is sending the spam gets the rejection, not the forged sender email address.

Hopefully, once you are aware of the cause, these messages shouldn't be too great a problem. You should use a mail client that has good mail-filtering rules, plus Bayesian spam filtering. Good email filtering should enable you to create rules that discard error messages if they are not sent to the correct username. Bayesian spam filters learn from emails that you mark as spam and send similar, future emails to the junk folder automatically. While the latest versions of Microsoft Outlook (2003 and 2007) have reasonable spam filtering, we recommend users of Outlook Express switch to the free Mozilla Thunderbird, available from www.mozilla.com. We reviewed some excellent anti-spam software in our anti-spam group test in *Labs*, *Shopper* December 2006.

Restoring backed-up OE files

Q I backed up my Outlook Express files and now have a list of .dbx files I am unable to open. Can you help? Adobe 7 is installed.

Alan Lord, alordrey@beeb.net

A We're not sure how you are trying to open these DBX files. DBX files are a proprietary Outlook Express format, and this email program does not allow you to open any data file except the default identity. The only thing you can

do with them is import them into Outlook Express. By default, this will add the messages they contain to your current Outlook Express email. Adobe software has nothing to do with your situation.

To view the backed-up messages separately, set up a new identity in Outlook Express. Go File, choose Identities, Add New Identity. You can then switch to the new identity and choose Import from the File menu. Specify the location of the saved backup and it will be imported to the newly created identity.

Your experts

HELPFILE

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Paul Mullen

With 27 years of PC experience as a power user, programmer and IT consultant, Paul Mullen answers all PC problems, tackling hardware, system and security issues.



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SOFTWARE HELP 174

Kay Ewbank

Database developer and productivity expert Kay Ewbank offers help with office applications.



Ben Pitt

Professional musician and photo enthusiast Ben Pitt gives advice on using creative software.



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BUYING HELP

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Labs Editor Tom Royal recommends the best products for your specific requirements.



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BUSINESS HELP 180

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Please contact the relevant department at the email address listed above. You can also write to us at:

Help
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30 Cleveland Street
London
W1T 4JD

Please try to give full details of your problem. We need an email address or daytime and evening telephone numbers in case we need more information.

Although the policy of *Computer Shopper* is not to publish readers' email addresses, we include them in Help so that other readers with experience of similar problems can share their solution (please also cc any comments to the relevant Help department above). If you would prefer not to have your email address published, please say so.

How do I unblock email?

Q I have just found that an email has been returned to me with the following message:

SMTP error 550-Your IP is blacklisted. More info: Blocked - see 550 http://www.spamcop.net/bl.shtml?80.189.94.53

I have sent several emails today to various addresses, but this is the only one that's been returned. I have sent it twice using different PCs: one running Windows 98 SE, one Windows XP with Service Pack 2. I am running AVG Free, WinPatrol and AVG ewido anti-spyware software on both computers. None of these is showing unwanted nasties. Can you advise what this message means, and how I should resolve the blacklist?

Dave Ayres, daveayres@madasafish.com

A To cut down on the amount of spam they receive, many companies have resorted to using blacklists of servers and networks known to have sent spam. In some cases, they use the blacklists as one more criterion to judge whether a message is spam; in other cases, they might refuse to accept mail from any address on the blacklist. That is what has happened here. The site you are trying to contact has chosen to refuse email from any server on the Spamcop Blacklist.

Sometimes a dial-up or broadband user is unfortunate enough to be allocated an IP address previously used by a spammer, but usually the problem is with your ISP's mail servers. These may have been badly configured, allowing spammers to use them, or erroneously identified as a source of spam. In your case, the error message refers to the IP address 80.189.94.53. If you ping this, you will find it is smtp1.global.net.uk. Spamcop is a great service for reporting spam, but its blacklist is entirely automated and tends to be aggressive rather than conservative in its listing policy. If spam is

sent through a server, that server is automatically blacklisted for 24 hours. When you have a large ISP with thousands of customers, it is easy for one customer's computer to be infected by a spam-sending virus. Mail from all users of that ISP can then get blacklisted. In fact, Spamcop acknowledges this problem and recommends that its blacklist is used only as a method of tagging email, not rejecting it.

Companies considering using blacklists in this way should send back an email with a link that a real sender can use for verification. These links show you a picture of distorted letters that a human can read but a computer can't. If you type in the correct letters, your email address will be whitelisted and mail from that address will always be allowed through. When mail is rejected, you could try resending the message. Many ISPs have multiple outgoing servers to spread the load and the chances are the re-sent mail will go through another server that might not be blacklisted. Alternatively, you could wait 24 hours to see if the blacklist is lifted, or use a different email account to send the mail.

If you have access to alternative SMTP servers (for example, if you have a website, your web host may have a server you can use), you could try changing the outgoing server in your Outlook or Outlook Express settings. Beware that while it used to be OK to send your email through any server, not just one that matches the domain part of your email address, some large organisations such as AOL are now blocking emails where the sender email and server have different domain names.

YOUR OWN DOMAIN

Spam sent using fake email addresses (or worse, a stolen real email address) is a big problem. You can't just complain to the sender as they didn't send the message in most cases. Previously there was nothing to stop anyone adding whatever email address they liked in the From or Sender fields, because there was no check that the mail

came from that domain. In fact, there are lots of different reasons why mail may be sent from a different domain. For example, mail from most computershopper.co.uk addresses is sent through mail.dennis.co.uk, the magazine's publisher. However, mail from helpfile@computershopper.co.uk goes through a different server as I work from a different office. Many small businesses with their own domain name, send mail through an ISP's mail server.

To get around these problems, there is a proposed solution called Sender Policy Framework (SPF). The administrator of each domain adds extra records to the domain's DNS records. DNS is the system by which your browser finds the IP address for a website or the IP address of the mail server that receives mail for a domain. SPF extends that by adding optional records that specify the names of servers that a domain will use for outgoing mail. If you have your own domain, it would be a good idea to add SPF to your DNS records, as this will help prevent spammers stealing your email address. There are rumours that some large providers including AOL may start rejecting mail from domains that have not implemented SPF records. DNS records are normally set up by your web-hosting supplier, but often they have a user control panel that allows you to specify custom DNS records.

Check with your web-hosting supplier to find out how to do this. The format of SPF records is complex and it is best to ask the support team at your email provider for the correct format. You could also use the tool at www.openspf.org/wizard.html to define your records. Get the SPF right, though. If you don't have SPF records your mail will probably be accepted since many domains have not yet set up SPF, but if you provide SPF information it must match the mail server you use or your mail could be rejected. There is a tool to check SPF records at www.seoconsultants.com/tools/spf. Visit www.openspf.org for details.

Recovering from hard disk failure

Q I have an old 166MHz Pentium MMX PC that is now used by my grandchildren. However, the 2.3GB hard disk seems to have gone on strike. On startup, it will not boot Windows and keeps claiming, "No system disk, press any key". I have Windows 98 and Windows XP Professional Edition on CD, but it refuses to boot from either. Have you any ideas as to what is going on?

Bernard Van Nuil, bernard@hamradio977150.orangehome.co.uk

A The technique for booting from CD (known as the El Torito standard) was established in 1995 and was not widely adopted until 1997. Your computer is likely to be much older. Older computers usually only had the choice of booting from floppy disk or hard disk. For these, you need an emergency boot floppy disk that will allow you

to run MS-DOS tools such as Scandisk to check your hard disk and access the CD-ROM drive. If you don't already have one around, you can create one from a working Windows 98 system or download one from www.bootdisks.org. An alternative is to download and install Smart Boot Manager, which is free from <http://btmgr.sourceforge.net> and will allow any computer to boot from a CD-ROM.

Regardless of any of this, you should first go to the BIOS setup. The key to press to enter this system should be shown when you start booting up the PC. If not, common choices are Del, F1, F2 or (for Compaq PCs) F10. Once in setup, check a hard disk is shown. Yours may simply have lost the CMOS settings. Some BIOS setup programs require you to specify the hard disk you have, while others detect it automatically for you. Always look for an auto-detect option. While still in the BIOS, look for a Boot order option. If it is present (older computers didn't give you a

choice), it may have its own menu, or it may be an option under Advanced BIOS. Here you will see which boot devices it supports. Ensure that a floppy disk (or CD, if you're lucky) is specified before the hard disk in the boot order.

If you can't find the hard disk using the BIOS setup program, it's likely the drive has died. We wouldn't bother trying to replace it, because used replacement drives are likely to be much larger and this computer may not be able to handle drives larger than 8GB. If you can find a warehouse dealing in surplus equipment in your area, the chances are they will have huge stacks of used business-quality systems such as Compaq Deskpro or Dell Optiplex PCs with a 600MHz or faster Pentium III processor, 128MB RAM and 10/20GB hard disks for under £50. Such systems won't be much use for running Windows XP, but can run Windows 98 or Windows 2000 nicely. Beware of early Pentium 4 systems that used expensive RAMBUS memory.

Batch file to turn off screensaver

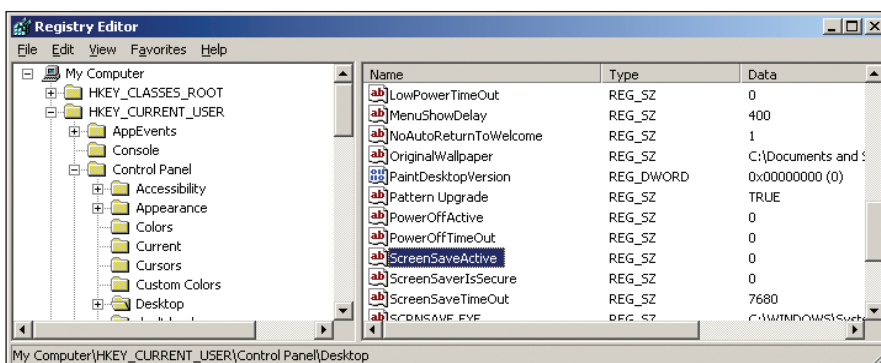
Q I have a TV tuner in my PC. I also have my screensaver set to activate after just two minutes, due to the fact that I want to preserve my expensive flat screen when I'm not working on my computer. A problem arises when I'm watching TV or a DVD because the screensaver kicks in. The only solution is to unset the screensaver manually in Display Properties and reset it after I've finished, which is a nuisance.

It would be nice if I could create a simple batch file that could switch the screensaver off and on. I could leave this on my desktop; a couple of clicks and I'm all set. But I've found that Windows Screensaver doesn't have a usable command line.

Richard Grant, richard.grant@dial.pipex.com

A The purpose of screensavers is to avoid the burn-in that occurs with a cathode ray tube monitor when the same image is shown onscreen for a long period. After years of constantly being run, the electron beam burns screen pixels, leaving an image that can be seen clearly when the monitor is turned off. This is also distracting when the monitor is in use. As far as we know, LCD panels do not suffer from the same kind of screen burn problems, so there isn't the same need for a screensaver on an LCD panel. Still, screensavers are useful to protect data on an unattended computer from being accidentally seen. They're also fun.

As you have found, they are controlled from the Control Panel and, in most cases, do not have a command-line program to turn them on or off. However, the screensaver



▲ Windows' Registry Editor lets you access the switch that turns your screensaver on and off

settings are stored in the Registry, so you can write a batch file that uses a Registry settings file to change their value.

Click on Start, Run, type regedit and then click OK. Once the Registry Editor opens, navigate to HKey_Current_User, Control Panel, Desktop. In the right-hand window, scroll down and highlight ScreenSaveActive. Once you have highlighted this value, and assuming your screensaver is on, click on the Registry Menu and choose Export. Choose a suitable location and filename such as C:\Windows\ScreenSaverOn.reg. Click on ScreenSaveActive and change its value to 0 and click OK. Export it again, this time saving the file as ScreenSaverOff.reg.

Right-click on each of these .reg files and choose Edit. They will open in Notepad, and you'll see that they contain lots of settings, not just the one you want to change. If you left these lines in, they could potentially undo other changes you make to your desktop

settings. Delete the additional lines until you are left with a file that contains just the following three lines:

```
Windows Registry Editor Version 5.00
[HKEY_CURRENT_USER\Control Panel\Desktop]
"ScreenSaveActive"="1"
```

Save this file. You must similarly edit and save the ScreenSaverOff.reg file, which should look the same except with a value of zero.

Double-clicking either of these files will cause their settings to be transferred to the Registry. Alternatively, you can incorporate them in a batch file. To avoid getting asked whether you want to import values, use the RegEdit command with the -s switch along with the .reg filename, as in the following example batch file:

```
regedit -s ScrSaverOff.reg&
rem screensaver is now off&
rem use other batch file to turn on&
```

Troubleshooting Stop 9C errors

Q I have been getting a blue screen on my PC, where the last line of the narrative reads:

STOP : 0X0000009C (0X00000004,0X80545FF0,0XB2000000,0X00070F0F)

This message has come up after I have been on the internet, printing, on Skype and various other activities. I understand that this may be a problem with the sound card installed in this computer. I have tried to download an update for this, but I cannot marry up the details of my card with those on the Nvidia website. Could you please advise how to cure the problem?

Terence Boden, terence.boden@btopenworld.com

A A stop error with the 9C code (also written as 0x9C or 0x0000009C) refers to a Machine Check Exception, which means the processor has detected a hardware error, usually corrupted signals on the system bus. The parameters listed after the error code are hardware specific and not usually helpful in tracking down the problem.

Some of the possible causes of a Stop 9C message include bad memory, a bad power supply that provides voltage out of range or voltage spikes, damaged capacitors on the motherboard, overheating (perhaps a fan has failed), timing problems (usually due to an overclocked processor), system bus problems (possibly caused by a bad PCI card) or faulty IDE cables. If you've added any new hardware recently, such as additional memory, remove it and see if the problem goes away. If not, open the case and check all the fans are working, including the one on your graphics card if one is present. On some computer systems, fans are temperature controlled and come on only when a certain temperature is exceeded, but all fans should run briefly when the system is first powered on.

While the case is open, examine the motherboard's capacitors. These are small cylinders, usually with an X or K engraved on their aluminium tops. Pay particular attention to those near the processor and memory sockets for signs of bulging or leaking. The tops of each capacitor should be flat and the sides straight. Damaged capacitors are a common cause of corrupted signals. Reboot and run the BIOS

setup program and reset everything to default values. Some systems provide a 'fail-safe' default that, although slower than the optimum settings, is useful for testing. While in the BIOS, check the PC Health or hardware monitor screen if you have one to see what processor temperature it is reporting and what voltages the power supply is providing. If you suspect the problem may be heat related, perhaps because the problem occurs only after the system has been running for a while, you may want to load Motherboard Monitor (MBM5) from <http://mbm.livewiredev.com> to provide you with a continuous display of the processor temperature.

If this does not help, try disconnecting everything except the bare essentials. For example, a damaged network card may be the problem. You can't remove components integrated into the motherboard and it is not practical to remove the graphics card unless you have a replacement card to try. The problem is unlikely to be due to a device driver, although occasionally a driver may change timing parameters and result in an error. If you can't find any obvious hardware error, it is a good idea to install the latest BIOS and chipset drivers for your motherboard.

Problems trying to upload website

Q I am having a problem loading a website I have created for a local club. I have used Serif WebPlus 6 to create a five-page site including a number of pictures. The website is a .org one provided by Strato using its EasyWeb package. I try to publish the site using WebPlus's Publish Site option and it comes up with a box asking for FTP Account, FTP Address, Username, Password and Folder.

I asked the Strato technical helpline what to put in these boxes and it said to use the website name for the first three, the password I have set up and for the folder to use the filename I have saved the site under in WebPlus. This does not work. WebPlus loads the pages but, when I check the site, it says that the name has been reserved by Strato and has no content. Each organisation says the problem must be with the other.

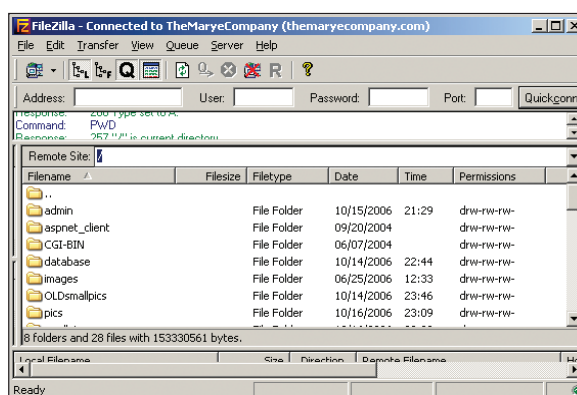
Keith Fox, mrkeithfox@yahoo.co.uk

A The advice you have been given regarding the folder to specify is wrong. WebPlus already knows which folder on your local computer contains the files to upload. We think it is asking for the folder name on the remote website where your

HTML files will go. This depends on how the web server has been set up, and into which folder in the server's folder structure the FTP service will log on.

In many cases, an FTP login will start at the folder that should contain your website files, so you can leave this field empty. In a few cases, you'll see folders for every website hosted on that server and you'll have to choose the one matching your site name. The others won't be accessible to you. The FTP uploader built into your web-design package is convenient, but once you set the initial folder correctly, it usually does not show the contents of the folder you are accessing and so can't help you see what is going wrong. The command-line FTP program included with Windows is unfriendly, so we suggest you download FileZilla, a free FTP program from <http://filezilla.sourceforge.net>, also in the Expert Toolkit of our cover DVD. This will show the contents of your home folder.

You may find it contains a folder with the name of your website, or there may be a folder



▲ You must locate the correct folder to upload to your website

called html_files or www, depending on how the server was set up. These should contain the website's displayable files. If you don't see an obvious folder in which to upload the HTML files, you may already be in the right folder. Try creating a small webpage and uploading it with the name index.html (or whichever start page name your web host expects) to this folder, and see if it appears in your browser. Even if this does not work straight away, Strato should be able to help you without blaming the WebPlus software.

Moving Windows to a new computer

Q I have bought a faster PC and wondered if I can move over all my files, settings and programs from my old PC without having to reinstall them. Is this possible? If not, is it possible to add my old disk to the new PC and run Windows from that?

Len Travis

A Windows XP has a Files and Settings Transfer Wizard that transfers most user data and settings to a new PC. However, it does not transfer applications and may miss data that isn't stored under Documents and Settings. For this to work properly, the applications need to be installed on the new computer first.

Applications are going to be your biggest problem. Most Windows applications cannot just be moved from one computer to another but have to be re-installed. This is because the original installer places lots of DLL files in the Windows\System32 folder and lots of entries in the Registry. Where you need to transfer a program and can't find the original install media, it is possible to hunt down all these changes, export each Registry change to a separate file and transfer them to the new computer. However, this is a time-consuming and error-prone process. WinCleaner OneClick Cleanup 10.2, which is on this month's cover disc, automates this with its Mover function, but isn't foolproof. See page 155 for details.

The only foolproof way to avoid reinstalling applications is to transfer your entire Windows installation to a new computer. This poses three big problems. First, you will be

transferring all the clutter that has built up in your Registry as you have added and removed programs. For this reason, many people like to do a clean install of Windows every couple of years. However, if the only programs you installed on the old computer are those you continue to use, it might be a practical possibility.

The second problem is that Windows includes device drivers for the particular hardware on your computer, so after transferring it to the new computer there is a good chance it will hang when booting. You will then need to boot from a Windows XP CD and do a repair install of Windows over the top. This installs the device drivers needed for your new hardware, without wiping the applications. The CD used must be a large OEM, system builder OEM, retail or volume licensing disc. It needs to be the same as was installed originally and if it is a large OEM disc, from HP or Dell, say, it must be from the same manufacturer. Unfortunately, many computers don't come with a proper Windows CD that allows you to do a reinstall. Dell used to supply them, but they now come only with business systems, unless you order them as an extra-cost item with your new PC.

The third issue with moving Windows is the licensing rules. If you have a retail version of Windows, which you bought in a box, you are free to move it from one computer to another.



▲ Files can be transferred to a new PC with Windows' Transfer Wizard

OEM versions are licensed for use only with the computer with which they were sold. If your new hardware came with a new OEM copy of Windows, you can use that licence, but you would be able to do a re-install only if you re-install using a CD that matches that licence. If your old computer came with a Windows CD, but your new one didn't, and you reinstalled the old Windows on the new PC using the old CD, it would reinstall but would give an activation error because the new hardware would not match the old. Unless old and new Windows come from the same OEM, or were both 'system builder' licences where the licence sticker does not have the manufacturer's name printed on it, you probably won't be able to enter the new licence key that came with your new CD.

Connecting an old hard disk to a new computer

Q My old PC failed completely and the problem was traced to a faulty motherboard. Because of its age, rather than having the old PC repaired, I bought a new one. I would like to transfer some of the data from the old disk, a Fujitsu MPE3136AT-GT, to the new computer. Can you advise me on how I should go about this with only one active computer?

Peter Kirkman, peter.kirkman@virgin.net

A For a tower or desktop computer, the simplest method is to open the case, unplug the cables going to the CD or DVD drive and connect the old hard disk to these. When you boot into Windows, the drive should be visible and you can copy the old files from it. If there are two optical drives connected to the cable, disconnect both to avoid complications with jumper settings.

One problem you might encounter is if your new computer comes with a SATA drive. Your old drive is most likely a Parallel ATA

(PATA) drive. Most BIOSes will attempt to boot from a PATA drive before accessing any available SATA drives. If you enter the BIOS setup screen, usually by pressing Del or F2 at startup, you should find an option to change the boot order. On newer BIOS setup programs, you may have to set the order of device groups (CD drives first, then hard drives and so on) and use a separate option to control the order of hard disks. Alternatively – your only option if your new computer is a notebook – you can put the drive into an external USB2 or FireWire drive case. This also allows you to re-use it as a backup device, though one with just 13GB.

There are a couple of situations where these approaches won't work. Both occur if the old computer used a non-standard master boot record. The first problem arises if special software was used to allow the old computer to use a drive larger than its BIOS supports. For example, some old computers built before 1998 supported drives only up to about 8GB. If such an old computer later had its hard disk replaced

with a larger one, special software might have been installed to work around the BIOS limit. Overlay software often deliberately changes the drive type identifier in the partition table to prevent a user accessing the drive if he booted from a floppy disk without the overlay software being loaded.

The second problem appears if a utility called GoBack has been used. This aims to restore the drive to a previous state. Again, it changes the disk type in the partition table. To fix either of these problems, you should connect the old drive as the only drive in your new system and try to boot from it. If Overlay or GoBack is installed, you'll see a message before Windows loads, giving you the opportunity to press a key to access its control menu. For drive overlays, you'll usually press Ctrl-A, after which you can turn off the drive-protection feature. If you enter the GoBack startup menu, there should be an option to uninstall GoBack, although this does not work in all versions. If that is the case, you will have to edit the master partition record manually.

Are two sticks better than one?

Q I have an Asus A8V motherboard with an Athlon dual-core processor. The board has four memory slots and it says I can use single memory modules or matched-pair memory modules. Should I use a single 1GB or a matched pair of 512MB?

Roy Collingwood, roycollingwood@gmail.com

A The Asus A8V uses a VIA K8T800 Pro chipset. If you bought just a single 1GB module, memory bandwidth would be limited by the data transfer speed across its 64-bit wide memory bus. However, this chipset, like most new chipsets, features a dual-channel memory bus. With a pair of modules operating in dual-channel mode, the second 64 bits of memory could be read while

the first module was waiting to access the next memory location. In theory, the dual-channel DDR technology doubles the bandwidth of your system memory. So using a matched pair of memory modules will maximise performance.

Make sure the memory modules are placed in the correct slots. To enable dual-channel you must have a matching pair of DDR modules in the blue sockets, which are slots 1 and 3. Matched pairs have been described as a gimmick and an excuse for manufacturers to charge more, and in many cases you can get just as good performance by using two separate but identical modules, but this chipset is fussy about the memory it uses and the BIOS memory timing settings. In this case, a matched pair of good-quality memory modules would probably be a smart buy if you want it to run in dual-channel mode.

Dual-channel operation at high memory speeds demands a good-quality power supply. Cheap power supplies assumed that only one memory module at a time would be drawing power to access memory. We have seen systems with two 512MB sticks of memory that would operate with either stick, or even with both sticks in slots 1 and 2, but until the power supply was replaced they crashed when used in dual-channel mode. The only downside to using matched pairs of memory is the capacity to upgrade later. If you start with a single 1GB module, you can upgrade to 4GB without removing any memory. However, don't buy a 1GB module with the plan of later buying a second one and running in dual-channel mode; modules bought at different times, perhaps from different suppliers, might not have identical memory timings.

Finding a use for a 3.2GHz processor

Q I've just upgraded my Dell Dimension 9100 from its original Intel Pentium 4 640 3.2GHz processor to an Intel Pentium D 940 3.2GHz chip. I don't know what to do with the old processor, which still performs respectably. I could buy a barebones case, motherboard, memory and hard disk, and build my own system, but I don't have the expertise or time. The best way forward seems to be to acquire a second-hand computer and upgrade it with my spare processor. It would need a 775-pin socket, 800MHz FSB and 945 chipset to be compatible, and a low-enough clock speed to make the upgrade worthwhile. Can you recommend which computer to go for (I would prefer a Dell if possible)?

Chris Stephens, chris.r.stephens@talk21.com

A Building a system from scratch would be simpler than finding the right system to upgrade. The slowest 800MHz FSB Socket 775 processor was the Pentium 4 model 520 running at 2.8GHz. Even if you could find one, we don't think upgrading to 3.2GHz would be worth it. Your Prescott 2M processor may have the option of 64-bit operation, but it does not increase performance much over earlier Prescott models. Besides, what would you then do with the 2.8GHz processor?

To increase performance, you'd have to find a system that has a 533MHz frontside bus processor with a motherboard capable of 800MHz operation. Dell doesn't give out a lot of detail about its motherboards and doesn't encourage users to swap processors. However, clues can be derived from the different processor

options with which a system may be specified. Check the service manual on Dell's website for specifications. For example, the Dimension 3000 commonly came with a Celeron D or 533MHz Pentium 4 processor, but was also available with a 3.2GHz 800MHz processor.

Dell computers usually come with a carefully planned mix of features, and systems that need a faster processor are likely to have one. The Dimension 3000 is limited by its integrated graphics, with no upgrade options, and is intended for simple tasks such as word processing. It would not make a good gaming system and is probably not going to benefit a lot from a faster processor. By contrast, systems such as the Dimension 5100 will already be equipped with a fast processor. We'd be tempted to sell the processor on eBay. 